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NOTICE OF ALLOWANCE AND FEE(S) DUE

25908 7590 01/07/2004
NOVOZYMES NORTH AMERICA, INC.
500 FIFTH AVENUE
SUITE 1600
NEW YORK, NY 10110

EXAMINER
MONSHIPOURI, MARYAM

ART UNIT PAPER NUMBER
1652

DATE MAILED: 01/07/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,339	11/09/2000	Henrik Bisgaard-Prantzen	5835.200-US	9183

TITLE OF INVENTION: FUNGAMYL-LIKE ALPHA-AMYLASE VARIANTS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	04/07/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

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If the SMALL ENTITY is shown as NO:

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B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status.
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.



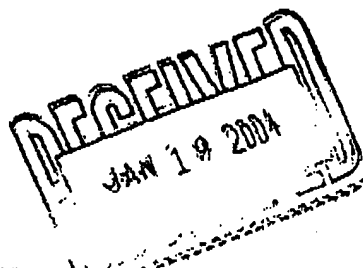
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			EXAMINER MONSHIPOURI, MARYAM	
			ART UNIT 1652	PAPER NUMBER

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



571-272
0527

Issue fee
Transmittal did
not come with it

Interview Summary	Application No.	Applicant(s)	
	09/710,339	BISGARD-FRANTZEN ET AL.	
	Examiner	Art Unit	
	Maryam Monshipouri	1652	

All participants (applicant, applicant's representative, PTO personnel):

(1) Maryam Monshipouri (3) _____

(2) Mr. Jason I. Garbel (4) _____

Date of Interview: 12 December 2003.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.
If Yes, brief description: _____

Claim(s) discussed: 31, 50 and 52.

Identification of prior art discussed: _____

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Examiner requested a declaration comparing the structures of bacterial and fungal enzymes as well as a new sequence listing. After viewing the declaration it was mutually agreed to delete the loops that are located in identical locations in both enzyme sources from claim 31 to overcome pending 103 rejection (see the examiner's amendment).

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

U.S. Patent and Trademark Office
PTOL-413 (Rev. 04-03)

Interview Summary

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An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment was given in a telephone interview with Mr. Jason I. Garbell, on 12/12/2003.

Examiner's Amendment to the Claims

Cancel claims 50 and 52.

In claim 31, line 3, delete "Region 98-110".

In claim 31, line 5, delete "Region 161-167".

Examiner's Amendments to the Specification

The following is an Examiner's Statement of Reasons for Allowance:

Claims 31-33, 39-43, 48, 51 and 53-62 are directed to variants of a parent Fungamyl-like alpha-amylase of specific amino acid sequence comprising:

- (a) alterations in specifically claimed regions, wherein the alterations are independently
 - (i) an insertion of an amino acid downstream of the amino acid occupying the position, (ii) a deletion of the amino acid which occupies the position or (iii) a substitution of the amino acid sequence which occupies the position with a different amino acid,
- (b) the variant has alpha-amylase activity, and

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(c) each region or position corresponds to a region or a position of the amino acid sequence of the parent Fungamyl-like alpha-amylase has said specific amino acid sequence and compositions comprising said variants.

Claimed variants are free of prior art. Further, although the prior art teaches generally about how to prepare variants of alpha amylases using bacterial like alpha-amylase (termamyl alpha amylase) crystal structure, said structure does not guide one of ordinary skill in the art in preparing variants comprising alterations at one or more specifically claimed regions of parent fungamyl-like alpha amylases, with properties claimed, rendering the invention also non-obvious.

Since claimed variants are novel and non-obvious, compositions comprising said variants are also novel and non-obvious.

Claims 31-33, 39-43, 48, 51, 53-62 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Maryam Monshipouri, Ph.D. whose telephone number is (703) 308-1083. The Examiner can normally be reached daily from 8:30 A.M. to 4:30 P.M.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. P. Achutamurthy, can be reached at (703) 308-3804. The OFFICIAL fax number for Technology Center 1600 is (703) 308-4242.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-0196.

M. Monshipouri
MARYAM MONSHIPOURI, PH.D.
PRIMARY EXAMINER

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